

Amendments to the Claims

Claim 1 (Currently amended): An isolated polynucleotide comprising a polynucleotide encoding a protein having fumonisin degrading activity, said polynucleotide selected from the group consisting of:

- ay
- a) a polynucleotide comprising at least 200 contiguous bases of the sequence set forth in selected from SEQ ID NOS: 35, 37, 39, 41, 43, and 45;
 - b) a polynucleotide comprising at least 70% 90% sequence identity to a polynucleotide as set forth in selected from SEQ ID NOS: 35, 37, 39, 41, 43, and 45;
 - c) a polynucleotide comprising at least 80% 95% sequence identity to a polynucleotide as set forth in selected from SEQ ID NOS: 35, 37, 39, 41, 43, and 45; and
 - d) a polynucleotide complementary to a polynucleotide of (a) through (c).

Claim 2 (Currently amended): A recombinant expression cassette comprising a polynucleotide encoding a protein having fumonisin degrading activity, said polynucleotide selected from the group consisting of:

- a) a polynucleotide comprising at least 200 contiguous bases of the sequence set forth in selected SEQ ID NOS: 35, 37, 39, 41, 43, and 45;
- b) a polynucleotide comprising at least 70%90% sequence identity to a polynucleotide as set forth in selected from SEQ ID NOS: 35, 37, 39, 41, 43, and 45;
- c) a polynucleotide comprising at least 80% 95% sequence identity to a polynucleotide as set forth in selected from SEQ ID NOS: 35, 37, 39, 41, 43, and 45; and
- d) a polynucleotide complementary to a polynucleotide of (a) through (c).

Claim 3 (Currently amended): A vector comprising a recombinant expression cassette comprising a polynucleotide encoding a protein having fumonisin degrading activity, said polynucleotide selected from the group consisting of:

- a) a polynucleotide comprising at least 200 contiguous bases of the sequence set forth in selected SEQ ID NOS: 35, 37, 39, 41, 43, and 45;

- b) a polynucleotide comprising at least ~~70%~~ 90% sequence identity to a polynucleotide as set forth in selected from SEQ ID NOS: 35, ~~37, 39, 41, 43, and 45~~;
- c) a polynucleotide comprising at least ~~80%~~ 95% sequence identity to a polynucleotide as set forth in selected from SEQ ID NOS: 35, ~~37, 39, 41, 43, and 45~~; and
- d) a polynucleotide complementary to a polynucleotide of (a) through (c).

Qy
Cust

Claim 4 (Currently amended): A host cell comprising a recombinant expression cassette comprising a polynucleotide encoding a protein having fumonisin degrading activity, said polynucleotide selected from the group consisting of:

- a) a polynucleotide comprising at least 200 contiguous bases of the sequence set forth in selected SEQ ID NOS: 35, ~~37, 39, 41, 43, and 45~~;
- b) a polynucleotide comprising at least ~~70%~~ 90% sequence identity to a polynucleotide as set forth in selected from SEQ ID NOS: 35, ~~37, 39, 41, 43, and 45~~;
- c) a polynucleotide comprising at least ~~80%~~ 90% sequence identity to a polynucleotide as set forth in selected from SEQ ID NOS: 35, ~~37, 39, 41, 43, and 45~~; and
- d) a polynucleotide complementary to a polynucleotide of (a) through (c).

Claim 5 (Currently amended): The host cell of Claim 4 wherein the cell is a plant cell.

Claim 6 (Original): The host cell of Claim 5 wherein the cell is selected from the group consisting of maize, sorghum, wheat, tomato, soybean, alfalfa, sunflower, canola, cotton, and rice.

Claim 7 (Currently amended): A transformed plant comprising a polynucleotide encoding a protein having fumonisin degrading activity, said polynucleotide selected from the group consisting of:

- Q5
- a) a polynucleotide comprising at least 200 contiguous bases of the sequence set forth in selected SEQ ID NOS: 35, ~~37, 39, 41, 43, and 45~~;

- as
canh
- b) a polynucleotide comprising at least ~~70%~~90% sequence identity to a polynucleotide as set forth in ~~selected from~~ SEQ ID NOS: 35, 37, 39, 41, 43, and 45;
 - c) a polynucleotide comprising at least ~~80%~~95% sequence identity to a polynucleotide as set forth in ~~selected from~~ SEQ ID NOS: 35, 37, 39, 41, 43, and 45; and
 - d) a polynucleotide complementary to a polynucleotide of (a) through (c).

Claim 8 (Currently amended): A plant seed comprising a polynucleotide encoding a protein having fumonisin activity, said polynucleotide selected from the group consisting of:

- a) a polynucleotide comprising at least 200 contiguous bases of the sequence set forth in ~~selected~~ SEQ ID NOS: 35, 37, 39, 41, 43, and 45;
- b) a polynucleotide comprising at least ~~70%~~ 90% sequence identity to a polynucleotide as set forth in ~~selected from~~ SEQ ID NOS: 35, 37, 39, 41, 43, and 45;
- c) a polynucleotide comprising at least ~~80%~~95% sequence identity to a polynucleotide as set forth in ~~selected from~~ SEQ ID NOS: 35, 37, 39, 41, 43, and 45; and
- d) a polynucleotide complementary to a polynucleotide of (a) through (c).

Claims 9-11 (Withdrawn)

Claim 12 (Currently amended): An isolated polynucleotide encoding a protein having fumonisin degrading activity, said polynucleotide ~~comprising a polynucleotide~~ selected from the group consisting of:

- aq
- a) a polynucleotide which hybridizes under high stringency conditions to a the full length complement of the polynucleotide as set forth in ~~selected from~~ SEQ ID NOS: 35, 37, 39, 41, 43, and 45 wherein said high stringency conditions comprise hybridization in 50% formamide, 1 M NaCl, 1% SDS at 37°C and a final wash in 0.1X SSC at 65°C;
 - b) a polynucleotide comprising at least 90% sequence identity to a polynucleotide as set forth in ~~selected from~~ SEQ ID NOS: 35, 37, 39, 41, 43, and 45; and
 - c) a polynucleotide comprising at least 95% sequence identity to a polynucleotide as set forth in SEQ ID NO: 35; and

d) _____ a polynucleotide complementary to a polynucleotide of (a) through (bc).

Claim 13 (Currently amended): A recombinant expression cassette comprising a polynucleotide encoding a protein having fumonisin degrading activity, said polynucleotide selected from the group consisting of:

a) a polynucleotide which hybridizes under high stringency conditions to a the full length complement of the polynucleotide as set forth in selected from SEQ ID NOS: 35, 37, 39, 41, 43, and 45; wherein said high stringency conditions comprise hybridization in 50% formamide, 1M NaCl, 1% SDS at 37°C and a final wash in 0.1X SSC at 65°C;

b) a polynucleotide comprising at least 90% sequence identity to a polynucleotide as set forth in selected from SEQ ID NOS: 35, 37, 39, 41, 43, and 45; and

c) a polynucleotide comprising at least 95% sequence identity to a polynucleotide as set forth in SEQ ID NO: 35; and

d) _____ a polynucleotide complementary to a polynucleotide of (a) through (bc).

Claim 14 (Currently amended): A vector comprising a recombinant expression cassette comprising a polynucleotide encoding a protein having fumonisin degrading activity, said polynucleotide selected from the group consisting of:

a) a polynucleotide which hybridizes under high stringency conditions to a the full length complement of the polynucleotide as set forth in selected from SEQ ID NOS: 35, 37, 39, 41, 43, and 45; wherein said high stringency conditions comprise hybridization in 50% formamide, 1M NaCl, 1% SDS at 37°C and a final wash in 0.1X SSC at 65°C;

b) a polynucleotide comprising at least 90% sequence identity to a polynucleotide as set forth in selected from SEQ ID NOS: 35, 37, 39, 41, 43, and 45; and

c) a polynucleotide comprising at least 95% sequence identity to a polynucleotide as set forth in SEQ ID NO: 35; and

d) _____ a polynucleotide complementary to a polynucleotide of (a) through (bc).

Claim 15 (Currently amended): A host cell comprising a recombinant expression cassette comprising a polynucleotide encoding a protein having fumonisin degrading activity, said polynucleotide selected from the group consisting of:

a) a polynucleotide which hybridizes under high stringency conditions to ~~a the full length complement of the polynucleotide selected as set forth in from~~ SEQ ID NOS: 35, 37, 39, 41, 43, and 45; wherein said high stringency conditions comprise hybridization in 50%

formamide, 1M NaCl, 1% SDS at 37°C and a final wash in 0.1X SSC at 65°C;

b) a polynucleotide comprising at least 90% sequence identity to a polynucleotide as set forth in selected from SEQ ID NOS: 35, 37, 39, 41, 43, and 45; and

c) a polynucleotide comprising at least 95% sequence identity to a polynucleotide as set forth in SEQ ID NO: 35; and

d) a polynucleotide complementary to a polynucleotide of (a) through (bc).

Claim 16 (Currently amended): The host cell of Claim 15 wherein the cell is a plant cell.

Claim 17 (Original): The host cell of Claim 16 wherein the cell is selected from the group consisting of maize, sorghum, wheat, tomato, soybean, alfalfa, sunflower, canola, cotton, and rice.

Claim 18 (Currently amended): A transformed plant comprising a polynucleotide encoding a protein having fumonisin degrading activity, said polynucleotide selected from the group consisting of:

a) a polynucleotide which hybridizes under high stringency conditions to ~~a the full length complement of the polynucleotide selected from set forth in~~ SEQ ID NOS: 35, 37, 39, 41, 43, and 45 wherein said high stringency conditions comprise hybridization in 50% formamide, 1 M NaCl, 1% SDS at 37°C and a final wash in 0.1X SSC at 65°C;

b) a polynucleotide comprising at least 90% sequence identity to a polynucleotide as set forth in selected from SEQ ID NOS: 35, 37, 39, 41, 43, and 45; and

c) a polynucleotide comprising at least 95% sequence identity to a polynucleotide as set forth in SEQ ID NO: 35, and

d) a polynucleotide complementary to a polynucleotide of (a) through (bc).

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Claim 19 (Currently amended): A plant seed comprising a polynucleotide encoding a protein having fumonisin degrading activity, said polynucleotide selected from the group consisting of:

a) a polynucleotide which hybridizes under high stringency conditions to a-the full length complement of the polynucleotide selected from as set forth in SEQ ID NOS: 35, 37, 39, 41, 43, and 45 wherein said high stringency conditions comprise hybridization in 50% formamide, 1 M NaCl, 1% SDS at 37°C and a final wash in 0.1X SSC at 65°C;

b) a polynucleotide comprising at least 90% sequence identity to a polynucleotide selected from as set forth in SEQ ID NOS: 35, 37, 39, 41, 43, and 45; and

c) a polynucleotide comprising at least 95% sequence identity to a polynucleotide as set forth in SEQ ID NO: 35 and

d) a polynucleotide complementary to a polynucleotide of (a) through (bc).

Claims 20-22 (Withdrawn)